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An International Investigation into Student Concerns regarding Transition into Higher Education

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ABSTRACT

The experience of transitioning into and starting higher education is a very individual one, with some applicants viewing the prospect of higher education as an unknown entity; for those who are first in their family or community to consider higher education, this can seem an "alien environment". These are just some of the issues that lead to applicants experiencing levels of concern when considering a transition into higher education. This international working group proposes to consider concerns across a wide range of participants: namely students who are in the process of transitioning into a higher education environment, and students who have recently completed this transition.

CCS CONCEPTS

• **Applied computing** → **Education**; • **Social and professional topics** → **CS1**;

KEYWORDS

concerns, transition, CS1, applicants, higher education

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1 INTRODUCTION

This working group is structured around two years of data collection regarding the concerns of Computing secondary school pupils when considering their upcoming transition into the first year of

higher education. Over the two-year period, it can be seen that pupils continue to demonstrate concerns regarding topics related to money, jobs and course achievement as opposed to those related to environment or social issues. Following this period of data collection across Scotland, with over 700 prospective applicants being surveyed, it is clear that students continue to demonstrate concerns regarding topics related to money, jobs and course achievement. The consistency between the reported areas of concern over the years is striking, suggesting that an understanding of these issues might help higher education institutions to better support their incoming students. It is posited that this process may have an eventual impact on retention rates - for example in the UK, it is reported that Computer Science suffers from low continuation rates, with 9.8% of CS1 students failing to progress [1].

The research team will conduct a follow up to the original study with the aim of exploring reported concerns, if any, from a diverse, international student body. Each working group member will administer a pre-prepared survey to participants who are either prospective applicants to a CS program, or current CS1 students.

Analysis of the gathered data at ITiCSE will help formulate an understanding about which concerns are most pressing when students are transitioning into CS1, and to better understand whether there is a growing trend of concerns that is common across a number of institutions or countries. The goal of the working group is therefore to bring together international educators:

- To give context to their collected survey data
- To explore these concerns in a wider group
- To identify recommendations to help tackle these concerns, allowing us to improve and enhance the student experience.

2 PRE-EXISTING WORK

2.1 Institutional Context

Initial work in this area was carried out by researchers at the Robert Gordon University (RGU), which is a public research university based in the North East of Scotland, with over 17000 students. It

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is one of the most northern universities in the UK, and attracts a number of students from rural communities. Within the School of Computing Science and Digital Media, students study a number of modules per semester, with two semesters spread across one academic year.

Within Scottish higher education, home students (at the time of writing, a classification consisting of students from Scotland as well as the European Union) are typically eligible to have their tuition subsidised by the Students Awards Agency Scotland (SAAS), effectively allowing a fee-free degree. Students who wish to study at undergraduate level are typically required to complete a set of national exams to meet a university's entry requirements - these can vary by department and by institution. These exams are taken by most students at age 16-17, with entry to university typically occurring at age 17-18.

2.2 Background to the Working Group

Pre-existing work has been centered around surveying applicants to higher education from the North-East of Scotland. An initial data collection lasting two years has shown that pupils continue to demonstrate concerns regarding topics related to money, jobs and course achievement over other, more traditional concerns, such as academic environment or social issues. The consistency between relative areas of concern over the two years is striking, further suggesting that better understanding of these issues might help schools and universities to better support this group of students.

This working group objectives were to first update the survey used so it works in an international context. Following this, the survey could be used this to gather data from a number of countries. Two participant groups have been identified for this work: 1) applicants to higher education; 2) current students in higher education, asking them to reflect on their transition experience.

2.2.1 Method. Researchers in this working group will reach out to participants via existing contacts and mailing lists. All invited participants (or where necessary, a suitable proxy such as a teacher) will be sent a link to a Google Form containing the survey and asked to distribute this among their class during a supervised session.

In past runs of this study, the online sessions were well received as they required less buy-in time for teachers.

2.2.2 Survey. The survey delivered is a slightly amended version of the standard survey used in the previous studies [2, 3], consisting of Likert-scale questions grouped into the following larger topic areas:

- Academic Staff;
- Academic Work and Workload;
- Accessibility;
- Homesickness;
- Housing;

- Job-related Concerns;
- Money;
- Social Concerns; and
- Study Experience.

Furthermore, there are five optional free-text areas asking students to elaborate on a number of items. These are used to give context to the Likert-scale answers, and also to generate quick visualisations (e.g. word clouds) that teachers could use to open up conversations with their pupils:

- I am looking forward to-;
- I will miss-;
- I hope I will find-;
- I worry about-;
- I expect-.

Amendments to the survey were necessary to ensure that it reads clearly for an international audience. This meant adapting some of the language so it worked outside of the original UK context. These changes were determined by the working group (e.g. using the words 'lecturer' and 'professor' interchangeably), as well as adding more detail to the questions (e.g. adding more context to the various ways a student might choose to finance their study).

3 FUTURE WORK

Initially, it is expected that researchers in this group will be able to target participants from the USA, the UK, Ghana, Sweden and Saudi Arabia, leading to a more international understanding of concerns that students have when entering higher education.

This will allow further analysis to show whether the previously-collected reported data was indicative of trending concerns, and to understand whether there is any correlation between the responses of applicants looking to transition into higher education and the reflective responses of current students who have already completed this transition.

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